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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,002	07/12/2001	William Alexander Hughes	5500-69700	2460

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EXAMINER

NAMAZI, MEHDI

ART UNIT	PAPER NUMBER
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2188

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/905,002

Applicant(s)

HUGHES, WILLIAM ALEXANDER

Examiner

Mehdi Namazi

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5, 7, 8, 11-13, 15, 18, 20, 26, 27, 28, 30, and 31 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 9, 10, 14, 16, 17, 19, 21-24, and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to amendment filed October 9, 2003.

Claims 1-20 have been presented for examination. New claims 21-32 have been added. Therefore, claims 1-32 remain pending in the application.

Drawings

2. Figures 2, 4, 6, should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 25-32 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 25, 27-32 are duplicate of claims 2-8.
4. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

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Misnumbered claim 26 been renumbered 27 as 26, 28 as 27, 29 as 28, 30 as 29, 31 as 30, and 32 as 31.

Response to Arguments

5. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 21-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. As per claim 21, lines 10-12 "depending on whether the directory memory includes an indication of the first address" is not supported by specification.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-2, 6, 9-10, 14, 16-17,19, 21-24, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller et al. (U.S. Patent No. 6,490,661), and further in view of Van Doren et al. (US Patent 6,202,126).

As per claims 1, 9,16, 21, and 23-24 Keller teaches a multiprocessing computer system("an apparatus"; title) comprising: a source tag identifies packets corresponding to a particular transaction initiated by source node("a memory configured to store an indication of one or more addresses"; col. 7, lines 41-43), when a first processing nodes sends a read command to a second processing node to read data from a designated memory location("wherein the memory is coupled to receive a first address of a read command"; col. 2, lines 48-50); and memory controllers 16A-16D may comprise control circuitry for interfacing to memories 14A-14D.("a control circuit coupled to the memory"; col. 5, lines 60-61), additionally, memory controllers 16A-16D may include request queues for queuing memory requests, generally, a processing node that has an associated cache memory responds to the Probe/Sre command by directing a ProbeRes packet to the source node 70 indicating a Miss("wherein the control circuit is configured to cause an issuance of one or more probes corresponding to the read command responsive to the first address missing in the memory";col. 5, lines 61-63, col. 14, lines 30-34).

As per claims 1, 9,16, 21, and 23-24, Keller teaches the claimed invention as described above, but fails to teach wherein the control circuit is configured to inhibit the issuance of one or more probes corresponding to the read command responsive to the first address hitting in the memory.

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Van Doren teaches while data stored in the victim data buffer, the central processing unit cannot issue a probe message that targets that data until the victim data buffer has been deallocated (abstract, col. 8, lines 11-25).

Therefore, it would have been obvious to one having ordinary skill in the art to modify the work of Keller because VanDorn teaches prohibiting issue a probe message before victim data has been deallocated in order to speed up movement of data from one location to another.

As per claims 2, 10, 17, and 25, Keller teaches response packet 34 may be used to transmit positive acknowledgment packets to terminate a transaction(" if the first address misses in the memory and the one or more probes result in clean probe responses, the control circuit is configured to store an indication of the first address in the memory"; col. 8, lines 5-7).

As per claims 6, 14, 19, and 29, Keller teaches and probe response, described later with reference to FIG. 12, may indicate whether or not a hit was detected for the requested cache back, generally, response packet 34 is used for commands that do not require transmission of the address during the carrying out of transaction(" the control circuit is configured to cause a source of the read command to store a block addressed by the first address in a shared state if the first address hits in the memory"; cols. 7-8, lines 67-4) .

As per claim 22, Keller teaches a directory memory (it is inherent , any memory system have a directory).

Allowable Subject Matter

10. 1. Claims 3-5, 7, 8, 11-13, 15, 18, 20, 26, 27, 28, 30, and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehdi Namazi whose telephone number is 703-306-2758. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 703-306-2903. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

Mehdi Namazi
Examiner
Art Unit 2188

January 12, 2004

Mano Padmanabhan
1/12/04

MANO PADMANABHAN
SUPERVISORY PATENT EXAMINER
TC 2100